NOTE XXXVII.

LA FOSSANE DE BUFFON, FOSSA FOSSA (SCHREBER)

BY

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(Plate 11).

The type-specimen of Buffon's *Fossane*, *Fossa Fossa* (Schreber) had been presented in 1761 by Monsieur Poivre to the *Cabinet du Roi*: it was a stuffed skin, *with the jaws* and the bones of the legs. The animal measured 17 *pouces* from the tip of the nose to the origin of the tail, the tail measuring $8^1/_2$ *pouces*. In Etienne Geoffroy St. Hilaire's Catalogue (des Mammifères du Muséum national d'Histoire naturelle de Paris, 1803) on p. 112 there we find under n° CCXLI «l'individu original de la description de Buffon» of the *Civetta fossa*, la Civette fossane: however Geoffroy adds that this specimen has been given by *Sonnerat*, meanwhile Buffon's type (see above) had been presented by *Poivre*! On my inquiry Monsieur de Pousargues from the Paris Museum had the kindness to instruct me as follows: «il y a en effet une contradiction évidente entre le texte de Buffon et celui d'E. Geoffroy St. Hilaire. D'après les recherches que je viens de faire pour éclaircir ce point, je crois l'indication de Geoffroy St. Hilaire *complètement erronnée*; celui donnée par Buffon est seul bonne. Nous possédons un Catalogue des Mammifères de la collection de Sonnerat; la Fossane n'y figure pas. A supposer même qu'elle y eut figuré, ce specimen n'eut pas été le type de Buffon. En effet Sonnerat n'a quitté Paris pour

commencer ses voyages qu'en 1768 or la lettre de Poivre à Buffon est bien antérieur et date du 19 Juillet 1761. C'est en revenant de son second voyage aux îles Philippines et à Timor, et après avoir hiverné à Madagascar en 1755, que Poivre a dû rapporter en France et donner au Jardin du Roi la peau bourrée de la Fossane qui a servi de type à Buffon. Vers 1766 ou 1767 Poivre fut nommé Intendant général des îles de France et de Bourbon, et quitta ce poste en 1773. Ce n'est qu'entre ces deux dates seulement que Poivre a été en rapport avec Sonnerat et Commerson. Je suis donc persuadé qu'il y a eu méprise de la part d'E. Geoffroy St. Hilaire.»

Therefore we may feel sure that E. G. St. Hilaire exhibited in his Catalogue really the type-specimen described by Buffon and that that specimen at that date (1803) really was existing in the collection of the »Muséum national". Afterwards however it has disappeared without a trace: sothat Gray said in 1872 (P. Z. S. L. p. 869) that he had searched for that type-specimen two or three times when he had been in Paris without being able to discover it; he fears the original specimen has been lost. He considers the rediscovery of the animal quite as important as the finding of a new species.

In the Leyden Museum collection there is a specimen of *Fossa fossa* collected by Audebert, another from Crossley's voyages and a third very old looking specimen of a bleached coloring and labeled, *1835 du Musée de Paris.* I thought this specimen to be perhaps the lost type-specimen of *la Fossane* Buffon; it at first seemed an impossibility to make this beyond doubt. In the skin however is an extremely fine cast of the anterior part of a skull, showing the teeth and molars all very clearly. I recollected that de Buffon (see above) said in his original description that the jaws where with the skin. So I thought the cast might have been taken from the original jaws and perhaps these jaws might be as yet preserved

in the Paris Museum. Monsieur de Pousargues was kind enough to inform me that an anterior half of a skull, containing the jaws, of what he thought to be that of the type, really was in the Laboratoire d'Anatomie comparée. Through the great kindness of my friend and colleague Prof. Milne Edwards of the Paris Museum, I have now before me that highly valuable anterior half of the supposed type-skull of *Fossane* Buffon. As I remarked above the cast is a very fine one, so perfectly made that each tooth and molar can be studied. And now it was a very great surprise, that in comparing teeth of the skull with those of the cast, I found that in the left ramus of the lower jaw of the skull there are *two* instead of *three* incisors: *the same abnormity is to be found in the cast*; this striking conformity is too obvious as to give rise to the supposition that it might be merely an accidental resemblance. *It proves that the old specimen in the Leyden Museum really is the type-specimen of Buffon's Fossane.*

Scrutinizing in our archives I could not find any list of exchange with the Muséum du Jardin des Plantes, containing the name *Fossane*, however Temminck and Schlegel paid in 1835 a visit to the Paris Museum and by that occasion made a lot of exchanges: so that we can now understand how we did procure the valuable specimen in question.

It is evident, that a specimen having been preserved about 140 years, hardly can be in what may be called a fine condition; it agrees however very well with de Buffon's description, although it is lighter colored generally, more brownish red.

The posterior part of the skull has been cut off as was the practise in foregoing days and the hindmost lower molars are wanting (fallen out); in the left ramus of the lower jaws is the anomality that I described above. For the rest the jaws are, compared with a skull of another specimen in our collection, much smaller, and this corresponds exactly with what the skin shows, as the whole animal

is conspicuous shorter and smaller in all its measurements than our other specimens. The skull however is that of an adult specimen, sothat, as its sexe is not known and not to determine, I incline to the hypothesis that it must be a female specimen and that of course the latter are smaller than the males. The teeth correspond exactly with those of our male skull in all details, they are all somewhat smaller in size.

Measurements taken in mm.:	*Paris skull. type.*	*Leyden skull. Audebert's collection.*	*Leyden skull. Crossley's collection.*
Length of all the the teeth in the upper jaw, measured from the anterior of the incisors to the last molar . . .	45.5	46.5	48
Length of lower jaw, from the angle to the base of the incisors	65	69	75
Length of bony palate . .	47	48	50

Although measurements taken from stuffed specimens have a very relative scientific value, it seems to me that in this case it has some interest. I call the specimens after the collectors:

Measurements taken in cm.:	♀ (?) *Poivre.*	♀ *Audebert.*	♂ *Crossley.*
From tip of nose to base of tail	45.5	48.5	53.5
Tail	22	26	26.5

Buffon gave somewhat other figures, viz. 17 pouces and 8.5 pouces, however at his time it was use to measure in a strait line: the tip of the tail apparently at that time was still wanting, moreover that part is black in other specimens, not in the type-specimen, sothat the tail is too short. Audebert's specimen is a female and like the type-specimen (♀?) a good deal smaller than the male collected by Crossley. The coloring of the Audebert's and Crossley's specimen is much fresher and darker than that of the old bleached type-specimen, the distribution of the

colors however is exactly like de Buffon described them: in our female specimen are the dark back-lines more or less broken into very close spots, especially those along the sides of the body. In the adult male there are on each side the uppermost line entire, the following one entire for more than its anterior half, for the rest they are broken into spots like in the type-specimen. I don't see the use of reproducing de Buffon's good description. I solely have to add that the four feet are five-fingered, that the innermost finger is very short and rather high placed, that the claws are well-developed and slightly curved.

A single word concerning the name »*Fossa*". Dr. Pollen the well known dutch traveller in Madagascar assured in his book «Recherches sur la Faune de Madagascar et de ses dépendances, 2me partie, 1868, p. 14»: *l'animal qui porte chez les malgaches le nom de Fossa est le Cryptoprocta ferox de Bennett et non pas la Viverra fossa de Gmelin. Le mot de «Fossa» indiqué pour la première fois par Flacourt pour désigner un animal de la forme du blaireau a été appliquée par Buffon et les naturalistes postérieurs, à une espèce de genette originaire de Madagascar. Les malgaches donnent cependant le nom de Sabady aux espèces de genettes, tandis qu'il appliquent constamment le nom de Fossa au Cryptoprocta ferox.* In other words Pollen was instructed by the Madagascar-people, that *Fossa* was the indigenous name for what we now call *Cryptoprocta ferox*, meanwhile they named our *Fossa fossa*, at once with other *Viverridae*, always *Sabady*. Now we cannot make out if Pollen was right, but it remains a fact that de Buffon was quite right also and that he had a good autority for his opinion in Flacourt himself. It is a curious fact that Pollen seems to have misunderstood what Flacourt tells in his book. The latter verbally stated as follows (Histoire de la grande Isle Madagascar, composée par le Sieur de Flacourt, Paris, 1661, p. 152): «*Fossa*, est un animal semblable au blereau de France, il

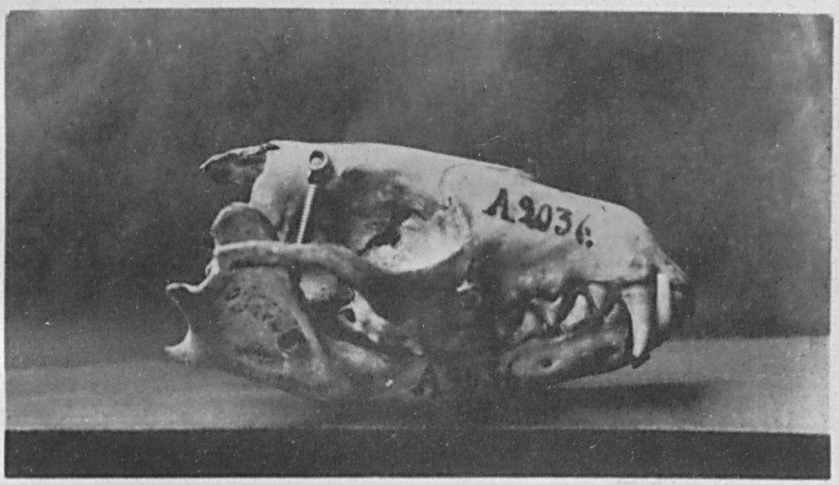
mange les poulles, il est d'aussi bon goust que le levraut quand il est jeune, ou que c'est une femelle» and *Farassa*, «c'est un animal bien carnassier de la grandeur d'un Renard, il a la queue fort grande et longue, et le poil de la couleur de celuy d'un loup.» I think that every naturalist will recognize in the *Farassa*, the *Cryptoprocta ferox*, the more as Flacourt gave a figure of that long tailed, fox-colored animal on the plate among other Mammals and Birds, Fishes and Reptiles. This now being an irrefragable fact I cannot find a reason to oppose de Buffon's naming *Fossa* the animal sent over by Mr. Poivre. The name *Sabady* has not been used in de Flacourt's book. Finally Pollen said (p. 16): «les malgaches prétendent qu'il existe dans leur pays une autre espèce de Fossa dont le pelage est d'un noir uniforme», an animal up to this day never seen by an European.

I remark that Monsieur Grandidier (Revue et Magasin de Zoologie, 1867, 2e Série, T. XIX, p. 317) mentions that the indigenous of Madagascar call *Cryptoprocta ferox*, *Fonsa* (*Fossa* apud Pollen) and *Viverra Schlegeli*, *Zabada: Sabady* of Dr. Pollen sounds somewhat like the latter name; so that it is highly probable that Pollen made confusion by misunderstanding the Madagascar-men.

The figures of the skull on plate 11 we owe to the extreme kindness of Professor Milne Edwards, who allowed me to take these photo's of the type-skull of «La Fossane de Buffon» in the Paris Museum. Figures 1 and 2 are somewhat more than natural size, figure 3 is more than twice natural size.

In the collection of the Leyden Museum (cf. my Catalogue ostéologique et systématique des Mammifères) there are three stuffed specimens, a skull belonging to Crossley's ♂-specimen and a skeleton taken out of Audebert's ♀-specimen. This skeleton presents 13 ribs, 20 thoracic, 3 lumbar and 23 caudal vertebra.

1.



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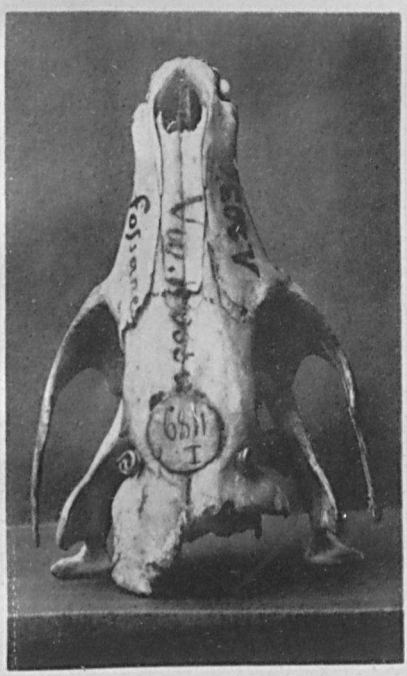

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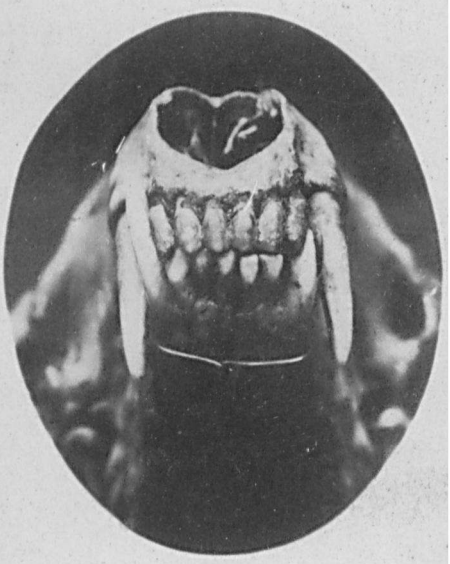

J. C. Wäkerlin ad nat. phot. Lichtdruk van Emrik & Binger, Haarlem.

Fossa fossa (Schreber).